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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/519,006	05/06/2005	Jurgen Specht	DNAG-297	7209
24972	7590	07/06/2009	EXAMINER	
FULBRIGHT & JAWORSKI, LLP			ZHENG, LOIS L	
666 FIFTH AVE			ART UNIT	PAPER NUMBER
NEW YORK, NY 10103-3198			1793	
MAIL DATE		DELIVERY MODE		
07/06/2009		PAPER		

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>
	10/519,006	SPECHT ET AL.
	<b>Examiner</b> LOIS ZHENG	Art Unit 1793

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If no period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

1) Responsive to communication(s) filed on 26 May 2009.  
 2a) This action is FINAL.      2b) This action is non-final.  
 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

4) Claim(s) 41-61 is/are pending in the application.  
 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.  
 5) Claim(s) \_\_\_\_\_ is/are allowed.  
 6) Claim(s) 41-61 is/are rejected.  
 7) Claim(s) \_\_\_\_\_ is/are objected to.  
 8) Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

9) The specification is objected to by the Examiner.  
 10) The drawing(s) filed on \_\_\_\_\_ is/are: a) accepted or b) objected to by the Examiner.  
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).  
 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
 a) All    b) Some \* c) None of:  
 1. Certified copies of the priority documents have been received.  
 2. Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

1) Notice of References Cited (PTO-892)  
 2) Notice of Draftsperson's Patent Drawing Review (PTO-948)  
 3) Information Disclosure Statement(s) (PTO/SB/08)  
 Paper No(s)/Mail Date \_\_\_\_\_

4) Interview Summary (PTO-413)  
 Paper No(s)/Mail Date \_\_\_\_\_  
 5) Notice of Informal Patent Application  
 6) Other: \_\_\_\_\_

## **DETAILED ACTION**

### ***Continued Examination Under 37 CFR 1.114***

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 26 May 2009 has been entered.

### ***Status of Claims***

2. Claims 41, 46 and 60 are amended in view of applicant's amendment filed 26 May 2009. Therefore, claims 41-61 are currently under examination.

### ***Claim Rejections - 35 USC § 112***

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

4. Claims 41 and 60 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

The new amended feature of "a total content of alkali metal ions, including the combined sodium and potassium content, ranges from 0 to 1g/l" as recited in claims 41 and 60 implies that sodium and potassium contents in the phosphating solution may both be zero, which is inconsistent with another claim feature that positively recites a

combined sodium and potassium content to 0.3 to 1.8g/l as shown in claims 41 and 60.

Since the scope of sodium and potassium content in the phosphating solution is not clearly defined, the instant claims 41 and 60 are vague and indefinite.

***Claim Rejections - 35 USC § 103***

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

6. Claims 41-61 are rejected under 35 U.S.C. 103(a) as being unpatentable over Gehmecker et al. US 6,168,674 B1(Gehmecker).

Gehmecker teaches a process for phosphating a metal surface that is at least partially aluminized(col. 2 lines19-24) with a aqueous, acidic coating solution comprising 0.4-2.0g/l of Zn, 7-25g/l of P<sub>2</sub>O<sub>5</sub>, 0.01-0.1g/l of H<sub>2</sub>O<sub>2</sub>, 0.3-2.5g/l of formate, up to 30g/l of nitrate, up to 3g/l of Mn, Mg, Ni, up to 0.03g/l of Cu, up to 1.5g/l of simple fluoride, up to 3g/l of fluoroborate, up to 3g/l of fluorosilicate(claims 1-14, col. 1 lines 59-67, col. 2 lines 1-11 & 60-63, col. 3 lines 5-36 ), The coating solution of Gehmecker has a pH of 3.6-5.0 (claim 8) and a free acid value ranges from 0.5 to 2.5(claim 1). The Examples of Gehmecker further disclose coating solutions having free acids of 0.7 and 0.6 points, total acids of 23 and 25 points, and coating weights of 2.2g/m<sup>2</sup> and 2.5g/m<sup>2</sup>(Tables in col. 5). Gehmecker further teaches that the coating temperature ranges from 30-65°C(col. 3 lines 37-38).

Regarding claims 41-58 and 60-61, Gehmecker further teaches that formate can be added as alkali formate (col. 3 lines 50-52), which implies the presence of Na and/or K concentrations. In addition, Solutions A and C as shown in Examples 1-2 of Gehmecker further teaches a formate ions concentration of 1g/l, implying an alkali ion concentration that is 0.338g/l if sodium is used or 0.465g/l if potassium is used, which falls within the claimed combined sodium and potassium concentration ranges of 0.3 to 1.8 g/l and 0 to 1 g/l as recited in claims 41 and 60 as well as sodium and potassium concentration ranges recited in claims 45-46. Therefore, the coating components in the coating solution of Gehmecker have concentrations that either read on the claimed concentrations or significantly overlap the claimed concentrations. The pH and the free acid ranges in the coating solution of Gehmecker also overlap the claimed pH and the claimed free acid ranges. Therefore, a *prima facie* case of obviousness exists. See MPEP 2144.05. The selection of claimed coating component concentration ranges, pH and free acid ranges from the disclosed ranges of Gehmecker would have been obvious to one skilled in the art since Gehmecker teaches the same utilities in its' disclosed coating component concentration ranges, pH and free acid ranges.

With respect to the precipitation from an Al-F complex as amended in claims 41 and 60, Gehmecker does not teach any precipitation products from an Al-F complex. In addition, Gehmecker's coating solution is substantially the same as the claimed coating solution. Therefore, the examiner concludes that the precipitation products from an Al-F complex in the coating produced by the process of Gehmecker would have been scarce, if any, as claimed.

Regarding claim 59, one of ordinary skill in the art would have found it obvious to have applied the process of Gehmecker to any aluminum metal surfaces of any metal body, including the claimed automobile, aircraft, sheet, wire mesh and small plant, with a reasonable expectation of success.

7. Claims 41-61 are rejected under 35 U.S.C. 103(a) as being unpatentable over Schubach et al. US 6,497,771 B1(Schubach).

Schubach teaches a process for phosphating a metal surface, such as aluminum and aluminum alloys with a aqueous, acidic coating solution comprising 0.3-5g/l of Zn, wherein the ratio of Zn/P<sub>2</sub>O<sub>5</sub> is 1:5-1:18, 0.1-1.5g/l of nitroguanidine, 0.1-0.4g/l of hydroxylamine, 0.5-20g/l of nitrate, 0.01-3g/l of Mn, 0.01-3g/l of Ni, 1-100mg/l of Cu, 0.01-3g/l of simple fluoride, 0.05-2.5g/l of complex fluoride such as fluoroborate and/or fluorosilicate(claims 1-12, abstract, col. 2 line 58 – col. 3 line 23, col. 3 lines 45-57), The coating solution of Schubach has a pH of 2-4 (col. 4 line 40). The Examples of Schubach further disclose free acids ranging from 2.2-2.4 points, total acids ranging from 21-25.7 points, and coating weight ranges from 2.0-8.0g/m<sup>2</sup>(Table in col. 6). Schubach further teaches that the coating temperature ranges from 15-70°C(claim 9).

Regarding claims 41-58 and 60-61, Schubach further teaches that the nitrate can be added as alkali nitrate(col. 3 lines 10-11), which implies the presence of Na and/or K. Since nitrate ions may be present in an amount of 0.5-20g/l, the corresponding alkali ion concentration would have been 0.185-7.42g/l of Na is used or 0.315-12.6g/l of K is used, which at least overlap the combined sodium and potassium concentration ranges

of 0.3 to 1.8 g/l and 0 to 1 g/l as recited in claims 41 and 60 as well as the sodium and potassium concentration ranges recited in claims 45-46. Therefore, the coating components in the coating solution of Schubach have concentrations that either read on the claimed concentrations or significantly overlap the claimed concentrations. The coating temperature range as taught by Schubach significantly overlaps the claimed coating temperature range. Therefore, a *prima facie* case of obviousness exists. See MPEP 2144.05. The selection of claimed coating component concentration ranges and coating weight ranges from the disclosed ranges of Schubach would have been obvious to one skilled in the art since Schubach teaches the same utilities in its' disclosed coating component concentration and coating weight ranges.

With respect to the precipitation from an Al-F complex as amended in claims 41 and 60, Shubach does not teach any precipitation products from an Al-F complex. In addition, Schubach's coating solution is substantially similar to the claimed coating solution. Therefore, the examiner concludes that the precipitation products from an Al-F complex in the coating produced by the process of Schubach would have been scarce, if any, as claimed.

Regarding claim 59, one of ordinary skill in the art would have found it obvious to have applied the process of Schubach to any aluminum metal surfaces of any metal body, including the claimed automobile, aircraft, sheet, wire mesh and small plant, with a reasonable expectation of success.

***Double Patenting***

8. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

9. Claims 41-61 are provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 41-75 of copending Application No. 10/467,850(App'850). Although the conflicting claims are not identical, they are not patentably distinct from each other because App'850 teaches a metal phosphating process utilizing a zinc phosphate solution that is substantially the same as the claimed zinc phosphating solution with overlapping component concentration ranges.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

10. Claims 41-61 are provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 27-32, 38-42 and 44 of copending Application No. 10/555,929(App'929). Although the conflicting claims are not identical, they are not patentably distinct from each other because App'929 teaches a metal phosphating process utilizing a zinc phosphate solution that is substantially the same as the claimed zinc phosphating solution with overlapping component concentration ranges.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

***Response to Arguments***

11. Applicant's arguments filed 26 May 2009 have been fully considered but they are not persuasive.

In the remarks, applicant argues that Gehmecker does not teach maintaining alkali metal content within the claimed range and Gehmecker also teaches Lithium in an amount of up to 3g/l.

The examiner does not find applicant's argument persuasive. Although Gehmecker does not explicitly teach a specific total alkali metal content, Gehmecker does teach that its formate ions can be added as alkali metal salt. Based on the calculations conducted by the examiner, see paragraph 6 above, the phosphating solution of Gehmecker would have inherently contain alkali metal ions such as sodium and/or potassium in amounts that falls with the claimed total alkali metal ions or sodium

plus potassium ion concentration ranges. In addition, the lithium ions do not have to be present in the phosphating solution of Gehmecker since the lithium concentration disclosed by Gehmecker is up to 3g/l, which includes zero.

Applicant further argues that Gehmecker does not teach a coating process without a precipitation tank as claimed and Gehmecker teaches coating to be performed on steel, not on aluminum or aluminum alloy.

The examiner does not find applicant's argument persuasive because Gehmecker is silent with respect to a precipitation tank. The examiner cannot assume that Gehmecker's process involves using a precipitation tank if it is not taught. In addition, Gehmecker does not mention formation of sludge or precipitate, which implies that either sludge/precipitate does not form in the process of Gehmecker or only a minor amount of sludge/precipitate is generated and causes no significant problem to the process of Gehmecker. Therefore, a precipitation tank does not seem to be needed in Gehmecker.

In addition, Gehmecker teaches that its coating solution may be applied to surfaces of aluminized steel or aluminum and the alloys thereof (col. 1 lines 56-65, col. 2 lines 19-24)

Applicant further argues that Gehmecker teaches a free acid that produces a less acidic solution than the claimed solution.

The examiner does not find applicant's argument persuasive because Gehmecker teaches a free acid of 0.5 to 2.5 points (claim 1), which overlaps the claimed

free acid range of 1.6-2.8 points. Example 2 of Gehmecker further discloses a free acid value of 1.6 for Solution C, which reads on the claimed free acid range of 1.6-2.8 points.

Applicant further argues that Schubach does not teach the claimed alkali metal or sodium/potassium contents and Schubach also teaches the presence of lithium.

The examiner does not find applicant's argument persuasive. Although Schubach does not explicitly teach a specific total alkali metal content, Schubach does teach that nitrate ions can be added as alkali metal salt. Based on the calculations conducted by the examiner, see paragraph 7 above, the phosphating solution of Schubach would have inherently contain alkali metal ions such as sodium and/or potassium in amounts that overlap the claimed total alkali metal ions or sodium plus potassium ion concentration ranges. In addition, the lithium ions do not have to be present in the phosphating solution of Schubach since Schubach teaches other types of silicate without lithium is also a viable option for a stabilizer (col. 4 lines 13-18).

Applicant further argues that Schubach does not teach a coating process without a precipitation tank as claimed.

The examiner does not find applicant's argument persuasive because Schubach is silent with respect to a precipitation tank. The examiner cannot assume that Schubach's process involves using a precipitation tank if it is not taught. In addition, Schubach does not mention formation of sludge or precipitate, which implies that either sludge/precipitate does not form in the process of Schubach or only a minor amount of sludge/precipitate is generated and causes no significant problem to the process of Schubach. Therefore, a precipitation tank does not seem to be needed in Schubach.

***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to LOIS ZHENG whose telephone number is (571)272-1248. The examiner can normally be reached on 8:30am - 5:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Roy King can be reached on (571) 272-1244. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/George Wyszomierski/  
Primary Examiner  
Art Unit 1793

LLZ